

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:

LU et al.

Serial No.: Not Yet Assigned
(Divisional of U.S. Patent
Application Serial No. 09/076,517,
filed May 12, 1998)


For: AUDIENCE
MEASUREMENT SYSTEM FOR
DIGITAL TELEVISION

Filed: **July 19, 2001**

Group Art Unit: Not Yet Assigned

Examiner: Not Yet Assigned

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) 
) Richard Zimmermann

PRELIMINARY AMENDMENT

Commissioner for Patents
Box: Non-Fee Amendment
Washington, D.C. 20231

Dear Sir:

Before examining the above-referenced application, please enter the
following amendments and consider the following remarks:

In the Claims:

Please cancel claims 57-60 without prejudice to their further
prosecution, and amend claim 12 as follows:

12. The television audience measurement system of claim 10 wherein the comparator is arranged to sequentially compare the audio component of the plurality of television programs broadcast in the detected broadcast channel with the audio signal of the viewer selected television program so as to identify the viewer selected television program if the software agent is unable to detect a data element indicative of an identity of the viewer selected television program.

Please add new claims 70-87 as follows:

70. A television audience measurement method for identifying a viewer selected television program from among a plurality of television programs broadcast as a time division multiplexed sequence of packets in a broadcast channel, the viewer selected television program being displayed on a television display in a statistically selected location, the television audience measurement method comprising:

receiving the time division multiplexed sequence of packets in the broadcast channel;

acquiring an audio portion of the viewer selected television program;

recovering audio components respectively corresponding to the television programs contained in the sequence of packets; and,

comparing the audio components to the audio portion in order to determine the viewer selected television program.

71. The television audience measurement method of claim 70 wherein the acquiring of an audio portion comprises non-intrusively acquiring a representation of a speaker signal from a speaker associated with the television display.

72. The television audience measurement method of claim 70 wherein the acquiring of an audio portion comprises acquiring the audio portion from an output jack associated with the television display.

73. The television audience measurement method of claim 70 wherein the receiving of the time division multiplexed sequence of packets comprises:

acquiring an intermediate frequency signal from a viewer controlled tuner associated with the television display; and,

demodulating the intermediate frequency signal in order to receive the packets.

74. The television audience measurement method of claim 70 wherein the receiving of the time division multiplexed sequence of packets comprises:

picking up a local oscillator frequency signal from the television display;

identifying the broadcast channel from the local oscillator signal;

recovering the audio components from television programs contained in the identified broadcast channel; and,

comparing the audio components to the audio portion in order to determine the viewer selected television program.

75. The television audience measurement method of claim 70 wherein the receiving of the time division multiplexed sequence of packets comprises:

scanning each of a plurality of broadcast channels; and,

receiving a corresponding plurality of time division multiplexed television programs from each of the plurality of broadcast channels.

76. The television audience measurement method of claim 70 further comprising identifying persons in an audience of the viewer selected television program.

77. A television audience measurement method for measuring viewing of a television program viewed on digital television located in a statistically selected site comprising:

detecting an audio code embedded in the television program in order to identify the television program;

extracting an audio signature from the television program in order to identify the television program;

acquiring a program identification by use of a software agent to identify the television program; and,

selecting at least one of the detecting of the audio code, the extracting of the audio signature, and the acquiring of the program identification for identifying the television program.

78. The television audience measurement method of claim 77 further comprising retrieving an audience measurement packet from a television set in order to identify the television program, wherein the selecting of the at least one of the detecting of the audio code, the extracting of the audio signature, and the acquiring of the program identification comprises selecting at least one of the retrieving of the audience measurement data packet, the detecting of the audio code, the extracting of the audio signature, and the acquiring of the program identification for identifying the television program.

79. A method implemented by a software agent stored in memory associated with digital television equipment, wherein the software agent is arranged to acquire television audience measurement data relative to the digital television equipment, the method comprising:

logging a television program identification datum identifying a television program selected for viewing on the digital television equipment;

logging an identification datum associated with data corresponding to the television program selected for viewing on the digital television equipment; and,

logging an Internet identification datum associated with an Internet task of the digital television equipment.

80. A method for identifying a viewer selected television program from among a plurality of time overlapped television programs broadcast in a viewer selected broadcast channel and received by digital television program reception equipment, wherein the digital television program reception equipment has a data port, the method comprising:

reading program identifying data from among data provided on the data port; and,

storing the program identifying data.

81. The method of claim 80 wherein the digital television program reception equipment is a digital converter.

82. The method of claim 80 wherein the digital television program reception equipment is a personal computer.

83. The method of claim 80 wherein the digital television program reception equipment is a digital television set.

84. A method for identifying a viewer selected television program from among a plurality of time overlapped television programs broadcast in a viewer selected broadcast channel and received by digital television program reception equipment, wherein the digital television program reception equipment has a data port, the apparatus comprising:

reading program identifying data from among data provided on the data port; and,

communicating the program identifying data to a remote point.

85. The method of claim 84 wherein the digital television program reception equipment is a digital converter.

86. The method of claim 84 wherein the digital television program reception equipment is a personal computer.

87. The method of claim 84 wherein the digital television program reception equipment is a digital television set.

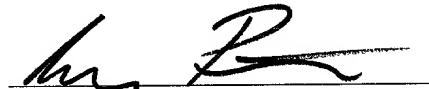
REMARKS

By way of this preliminary amendment, claims 57-60 have been cancelled without prejudice, claim 12 has been amended to change its dependency and claims 70-87 have been added. A version of amended claim 12 and added claims 70-87 with markings is attached hereto. Early and favorable allowance is respectfully requested.

Respectfully submitted,

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VERSION WITH MARKINGS SHOWING CHANGES MADE

In the Claims:

Please amend claim 12 as follows:

12. (Amended) The television audience measurement system of claim 10 [4] wherein the comparitor is arranged to sequentially compare the audio component of the plurality of television programs broadcast in the detected broadcast channel with the audio signal of the viewer selected television program so as to identify the viewer selected television program if the software agent is unable to detect a data element indicative of an identity of the viewer selected television program.

Please add new claims 70-87 as follows:

-- 70. A television audience measurement method for identifying a viewer selected television program from among a plurality of television programs broadcast as a time division multiplexed sequence of packets in a broadcast channel, the viewer selected television program being displayed on a television display in a statistically selected location, the television audience measurement method comprising:

receiving the time division multiplexed sequence of packets in the broadcast channel;

acquiring an audio portion of the viewer selected television program;

recovering audio components respectively corresponding to the television programs contained in the sequence of packets; and,

comparing the audio components to the audio portion in order to determine the viewer selected television program.

71. The television audience measurement method of claim 70 wherein the acquiring of an audio portion comprises non-intrusively acquiring a representation of a speaker signal from a speaker associated with the television display.

72. The television audience measurement method of claim 70 wherein the acquiring of an audio portion comprises acquiring the audio portion from an output jack associated with the television display.

73. The television audience measurement method of claim 70 wherein the receiving of the time division multiplexed sequence of packets comprises:

acquiring an intermediate frequency signal from a viewer controlled tuner associated with the television display; and,

demodulating the intermediate frequency signal in order to receive the packets.

74. The television audience measurement method of claim 70 wherein the receiving of the time division multiplexed sequence of packets comprises:

picking up a local oscillator frequency signal from the television display;

identifying the broadcast channel from the local oscillator signal;

recovering the audio components from television programs contained in the identified broadcast channel; and,

comparing the audio components to the audio portion in order to determine the viewer selected television program.

75. The television audience measurement method of claim 70 wherein the receiving of the time division multiplexed sequence of packets comprises:

scanning each of a plurality of broadcast channels; and,

receiving a corresponding plurality of time division multiplexed television programs from each of the plurality of broadcast channels.

76. The television audience measurement method of claim 70 further comprising identifying persons in an audience of the viewer selected television program.

77. A television audience measurement method for measuring viewing of a television program viewed on digital television located in a statistically selected site comprising:

detecting an audio code embedded in the television program in order to identify the television program;

extracting an audio signature from the television program in order to identify the television program;

acquiring a program identification by use of a software agent to identify the television program; and,

selecting at least one of the detecting of the audio code, the extracting of the audio signature, and the acquiring of the program identification for identifying the television program.

78. The television audience measurement method of claim 77 further comprising retrieving an audience measurement packet from a television set in order to identify the television program, wherein the selecting of the at least one of the detecting of the audio code, the extracting of the audio signature, and the acquiring of the program identification comprises selecting at least one of the retrieving of the audience measurement data packet, the detecting of the audio code, the extracting of the audio signature, and the acquiring of the program identification for identifying the television program.

79. A method implemented by a software agent stored in memory associated with digital television equipment, wherein the software agent is arranged to acquire television audience measurement data relative to the digital television equipment, the method comprising:

logging a television program identification datum identifying a television program selected for viewing on the digital television equipment;

logging an identification datum associated with data corresponding to the television program selected for viewing on the digital television equipment; and,

logging an Internet identification datum associated with an Internet task of the digital television equipment.

80. A method for identifying a viewer selected television program from among a plurality of time overlapped television programs broadcast in a viewer selected broadcast channel and received by digital television program reception equipment, wherein the digital television program reception equipment has a data port, the method comprising:

reading program identifying data from among data provided on the data port; and,

storing the program identifying data.

81. The method of claim 80 wherein the digital television program reception equipment is a digital converter.

82. The method of claim 80 wherein the digital television program reception equipment is a personal computer.

83. The method of claim 80 wherein the digital television program reception equipment is a digital television set.

84. A method for identifying a viewer selected television program from among a plurality of time overlapped television programs broadcast in a viewer selected broadcast channel and received by digital television program reception equipment, wherein the digital television program reception equipment has a data port, the apparatus comprising:

reading program identifying data from among data provided on the data port; and,

communicating the program identifying data to a remote point.

85. The method of claim 84 wherein the digital television program reception equipment is a digital converter.

86. The method of claim 84 wherein the digital television program reception equipment is a personal computer.

87. The method of claim 84 wherein the digital television program reception equipment is a digital television set. -- .